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(71) Applicant: **FUJITSU LTD**

(72) Inventor: **FURUKAWA HIDETO**
YOSHIDA MAKOTO
HATAZOE NAMI

(54) METHOD FOR DEFINING REFERENCE PHASE OF RADIO COMMUNICATION SYSTEM THROUGH USE OF M-GROUP ORTHOGONAL MODULATION AND SYNCHRONOUSLY DETECTING METHOD USING IT

(57) Abstract:

PROBLEM TO BE SOLVED: To improve the performance of an up line at the standard system of IS-95 by obtaining the correlation value of a common-mode component and orthogonal component corresponding to each Hadamard matrix by fast or inverse Hadamard transformation, executing specific calculation with respect to the correlation value and selecting fast or inverse Hadamard transforming output outputting the maximum value.

SOLUTION: A received IF signal is made into Ich and Qch signal components by an orthogonal detector 12 to be converted to digital signals respectively by filters 13, 14 and A/D converters 15 and 16. The Ich and Qch digital signals from the converters 15 and 16 are guided to an M-group orthogonal demodulation circuit 17 and respectively given fast Hadamard transformation or inverse Hadamard transformation by an M group orthogonal demodulation circuit 17. Then, a maximum value obtains I^2+Q^2 from the output of the fast Hadamard transformation or inverse Hadamard conversion, selects the correilation value of I and Q setting this to be maximum and makes this into a reference phase.